

REMARKS/ARGUMENTS

Office Action Summary

Claims 1-4, 7, 9-10, 12-15, 17, 19-20, 32, 34, and 36-37 are pending in the application. Claims 12-15, 17, 19-20, 32, 34, and 36-37 have been allowed. All of the dependent claims are objected to because the word "Claim" in the first line of each is capitalized. Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as obvious under U.S. patent No. 2,779,020 ("Wilmotte") in view of U.S. patent No. 4,605,901 ("Harrington"). Claims 1-4, 9, and 10 stand rejected under 35 U.S.C. § 103(a) as obvious under U.S. patent No. 3,787,629 ("Limberg") in view of Harrington. Claim 7 stands objected to as dependent upon a reject base claim, but would be allowable if rewritten in independent form. Applicant is unaware of any other rejections or objections pending in the application.

Applicant notes, with appreciation, that the drawings previously submitted have been accepted by the Examiner.

Amendments to the Claims

Claims 3-4, 9-10, 13-15, 17, 19-20, 34, and 36 have been amended to remove the capitalized 'C' from the word 'claim'. Claim 7 has been amended to incorporate all of the limitations from base Claim 2, thereby placing Claim 7 in condition for allowance. Claim 1 has been amended add the step of coupling the combined signals from the high isolation combiner to a single antenna output.

Rejection of Claims 1 & 2 Under 35 U.S.C. § 103(a): Wilmotte v. Harrington

The rejection relies upon Figure 4, Figure 6, and Figure 8 of Wilmotte for a teaching that a first modulated carrier and a second modulated carrier are combined in a power amplifier. Noting that Wilmotte fails to teach or suggest the use of a high-isolation combiner for modulated carrier signals, the rejection relies upon Harrington. However, a careful review of Figure 4, Figure 6, and Figure 8 of Wilmotte reveals a flaw

in this combination vis-à-vis that specific claim language at issue in the present application. First, the connection of the modulated carriers in Wilmotte are not combined, but merely summed into the input of a power amplifier (see items 55 and 15 in the respective drawing figures). The output of the power amplifier is then connected to an antenna for subsequent transmission. Note that the “combining” discussions cited by the Examiner in the rejections were directed to the “signal combiners” in the baseband multiplexing circuits. See items 52 and 52’ in the respective drawing figures. The claims of the present application require that the high isolation combiner specifically combine the modulated carrier signals to a single antenna output. None of the drawings of discussion in Wilmotte teach or suggest this concept.

Relying upon Harrington to bridge the gap of missing disclosure in Wilmotte is also flawed. Harrington uses a four-port hybrid device as a combining circuit, which is inherently a low power, small signal device. In Figure 1 of Harrington, signal generator outputs (items 1 and 7) are combined by hybrid combiners (items 15, 17, and 19) for measurement by a spectrum analyzer (item 13) through a device under test (item 11). Figure 2 contemplates the use of the Harrington combiners (items 52, 53, 54) for a radiated carrier signal, but, the combined signal is amplified by a broadband power amplifier (item 41) after being combined and before being coupled to an antenna (item 51). Thus, the output of the combiners cannot possible be coupled to a single antenna output as required by Claim 1 and Claim 2 of the present application.

The combination of Wilmotte and Harrington is this flawed because Wilmotte relies upon the power amplifier input to sum the signals, and Harrington requires that the signals must be combined before being amplified. Further, the claims of the present application require that the output of the combiner be coupled directly to an antenna output. Thus, the rejection under Wilmotte in view of Harrington is improper and should be withdrawn, and , such action is courteously solicited.

Rejection of Claims 1 & 2 Under 35 U.S.C. § 103(a): Limberg v. Harrington

The combination of Limberg and Harrington is also flawed. In Limberg, all of the combining processes taught be Limberg occur in the IF bands only, and not with modulated carrier signals as required by the claims of the present application. Consider Figure 1 of Limberg. The summing network (item 26) has its inputs coupled to the intermediate frequency signals of the system, such as from the balanced modulators (items 28 & 38). The output of the summing network (item 26) is coupled to the RF modulator (item 44), RF amplifier (item 46) and then to the antenna (item 48). The claims of the present application require that the combiner combine the modulated carrier signals to a single antenna output. Clearly, this is not consistent with the teachings of Limberg. Adding the teachings of Harrington does nothing to overcome this omission for the reasons stated above. Namely, Harrington requires that the signals must be combined before being amplified. Further, the claims of the present application require that the output of the combiner be coupled directly to an antenna output. Thus, the rejection under Limberg in view of Harrington is improper and should be withdrawn, and, such action is courteously solicited.

Rejection of Dependent Claims

All of the remaining dependent claims depend from independent Claim 2, which has been shown to be in condition for allowance. Therefore, all of the dependent claims are in condition for allowance as well.

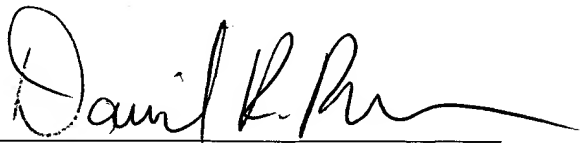
Conclusion

The foregoing is submitted as a full and complete response to the Office Action mailed February 21, 2006. The Applicant believes that the same places the present application in condition for allowance. Reconsideration by the Examiner and allowance of the claimed invention is hereby courteously solicited.

The total number of claims in the Application is unchanged, however, the number of independent claims has been increased from four to five since Claim 7 was redrafted without cancellation of its base independent Claim 2. Therefore, an additional fee of \$200 under 37 C.F.R. § 1.16(h) is presently due to cover the cost of the extra independent claim. The Commissioner is hereby authorized to charge the \$200 fee under 37 C.F.R. § 1.16(h) to Daniel R. Brown Deposit Account number 501507. Other than the extra independent claim fee and the one-month extension fee noted on page one of this submission, it is Applicant's belief that no other fees are required at the present time. In the event that the Examiner determines otherwise, the Commissioner is hereby authorized to charge such additional fees, excluding the Issue Fee, or credit any overpayment, to Daniel R. Brown Deposit Account No. 501507.

Applicant respectfully requests reconsideration by the Examiner and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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